

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,300,419 to *Sehanobish et al.* in view of U.S. Patent No. 6,469,100 to *Suzuki et al.* with supporting evidence from *Cazes* ([www.ampolymer.com/QuestionMw.html](http://www.ampolymer.com/QuestionMw.html)).

Regarding claims 1 and 9: *Sehanobish* teaches a propylene polymer composition comprising:

(a) a propylene block copolymer comprising

i) 57 parts by weight propylene polymer ("PP"; see Table 1, Example 1, col. 14);

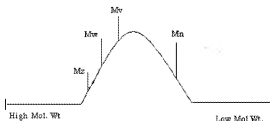
(b) 36 parts by weight polyolefin elastomer ("S/LEP"; Table 1, Example 1, col. 14) and carbon black (col. 8, line 65);

(c) 0.3 parts by weight of an electrically-conductive carbon (carbon black/CB1 in Table 1, Example 1, col. 14).

Components (d) and (e) are optional and not required limitations. They have been given little patentable weight.

*Sehanobish* recognizes the utility of a second block comprising a rubber portion comprising a propylene copolymer (corresponding to a(ii) above; *Sehanobish* col. 2, lines 45-68).

*Sehanobish* does not state whether the rubbery portion of the second block has a  $M_z$  equal to or greater than about 1,000,000. *Suzuki* teaches a polypropylene/ethylene propylene rubber, wherein the EPR block has a molecular weight of 440,000 (Example 2, Table 1, col. 24). Although *Suzuki* does not state the  $M_z$  as being greater, than 1,000,000, Example 2 of *Suzuki* is within the range of molecular weights taught for the rubbery block in the instant specification (page 3, lines 19-22), and the preferred embodiment substantially overlaps these ranges (see *Suzuki* col. 5, lines 51-52). Furthermore, a person having ordinary skill recognizes that  $M_z$  has a higher value than  $M_w$  (see *Cazes* page 7, diagram and text above the diagram):



In view of the molecular weight of *Suzuki* being within the range, and having a broad polydispersity (see Example 2), the  $M_z$  of *Suzuki* has been held implicit. *Sehanobish* and *Suzuki* are analogous art in that they are drawn to the same field of endeavor, namely molded polypropylene block copolymer compositions showing good mechanical properties. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to select the polypropylene homopolymer with a

rubbery block from the disclosure of *Sehanobish*. The motivation in selecting a rubbery polymer from the genus present in *Sehanobish* with a  $M_z$  of  $>1,000,000$  (as taught by *Suzuki*) would be to retain good impact resistance while avoiding processing difficulties (*Suzuki* col. 5, lines 42-52).

Regarding claim 2: *Sehanobish* further teaches the propylene block copolymer comprises an ethylene and propylene rubber (col. 2, lines 55-67).

Regarding claim 3: *Sehanobish* further teaches the polyolefin as i) having a density of equal to or less than about  $0.93 \text{ g/cm}^3$ ; ii) a molecular weight distribution of equal to or less than 3.0; iii) a composition distribution branch index equal to or greater than about 30% (see claims 1 and 16 of '419).

Regarding claim 4: *Sehanobish* in combination with *Suzuki* teaches the composition of claim 1, as set forth above.

*Sehanobish* does not state the composition having a surface resistivity of equal or less than  $10^{12}$  Ohms. However *Sehanobish* in view of *Suzuki* teaches the composition of claim 1. Case law has held "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP § 2112.01 (II).

Regarding claim 5: *Sehanobish* teaches carbon black (see Table 1, col. 14; CB-1 and CB-2).

Regarding claim 6: *Sehanobish* further teaches heat, light, oxygen stabilizers among other additives (col. 12, lines 1-10).

Regarding claim 7: *Sehanobish* teaches mold release agents such as magnesium and calcium stearate (col. 11, lines 64-66).

Regarding claim 8: *Sehanobish* teaches erucamide among other slip agents (col. 10, line 65 through col. 11, line 46).

Regarding claim 10: *Sehanobish* teaches the olefinic polymer present in an amount from 0-15 parts by weight (see claim 1(d) in '419) and may comprise polyethylene (HDPE/LLDPE; col. 10, lines 40-65).

Regarding claim 11: *Sehanobish* teaches the composition having 0-50 parts by weight of filler; the filler material may be talc, wollastonite, clay, among other compositions (col. 9, lines 1-30).

Regarding claims 12-14: *Sehanobish* teaches a process of extruding the propylene polymer composition into a fabricated article (col. 12, line 57 through col. 13, line 12). The polymer is fabricated into strands and pellets (col. 13, lines 7-10). The polymer may further be fabricated into automotive parts such as bumper fascia, among other components (see '419 claim 20).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Sehanobish* in view of U.S. Patent No. 6,300,419 to *Sehanobish et al.*, of U.S. Patent No. 6,469,100 to *Suzuki et al.* with supporting evidence from *Cazes* ([www.ampolymer.com/QuestionMw.html](http://www.ampolymer.com/QuestionMw.html)), as applied to claim 1 above, and further in

view of U.S. Patent No. 4,504,617 to *Yui et al.* This is an alternative rejection to the rejection set forth above under 35 U.S.C. 103(a) to *Sehanobish* in view of *Suzuki* in the instance that the resistivity is not inherent to the combination.

Regarding claim 4: *Sehanobish* in combination with *Suzuki* collectively teach the invention of claim 1, as set forth above.

*Sehanobish* is silent regarding whether the composition has a surface resistivity of equal to or less than  $10^{12}$  Ohms. *Yui* teaches a polypropylene copolymer (see abstract) with conductive carbon filler (col. 5, lines 4-25), having a resistivity on the order of  $10^2$  to  $10^4$  ohms (see Tables 13-15). *Sehanobish* and *Yui* are analogous art in that they are drawn to the same field of endeavor, namely synthesis of polypropylene/carbon black composites for molding materials. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to incorporate carbon black to the invention of *Sehanobish* in an amount that would improve the conductivity (*Yui* col. 16, lines 47-51), with the motivation of using the polymer in electronic applications (*Yui* col. 5, lines 44-51).

### ***Response to Arguments***

The following responses are directed to the document entitled "Remarks" (pages 5-6), received January 11<sup>th</sup>, 2010.

**A)** Applicant's arguments with respect to USPN 6,300,419 to *Sehanobish* have been fully considered but they are not persuasive.

While *Sehanobish* teaches a highly crystalline propylene polymer, *Sehanobish* recognizes that block copolymers such as PP/EP can be used in the invention (see col. 2, lines 45-68). Patents are relevant as prior art for all they contain; the preference of a polypropylene polymer does not constitute a teaching away (see MPEP § 2123).

**B)** Applicant's arguments with respect to the US 2002/0198350 to Machida have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of USPN 6,496,100 to *Suzuki*.

#### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. SALVITTI whose telephone number is (571)270-7341. The examiner can normally be reached on Monday-Thursday 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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